

REMARKS/ARGUMENTS

This Amendment is responsive to the Office Action mailed on April 3, 2008. Claims 1-26 were pending in the present application. This Amendment amends claims 1, 17, and 19, without adding or canceling any claims, leaving pending in the application claims 1-26.

I. Examiner Interview

On June 3, 2008, a telephonic interview was held with Primary Examiner Abel-Jallil, Examiner Gordon, and the undersigned. During the interview claim 1 was discussed in view of the *Sang* reference. Although no agreement was reached, the Examiner's suggested that the claim language be clarified to point out the differences between the claimed invention and the prior art. The applicants' representative appreciates the Examiners' helpful suggestions, and have amended the claims in accordance with the Examiners' suggestions. Applicants thus believe that the claims as amended are allowable over the cited art.

II. Claim Rejections under 35 USC § 103

Claims 1, 3, 5, 6, 14, 15, 17, 19 and 25-26 are rejected under 35 U.S.C. 103(a) as being obvious over *Drake* (U.S. Publication No. 2003/0070142), in view of *Rasmussen* (U.S. Patent No. 7,185,016), and further in view of Sang-Kyun Kim ("*Sang*") ("*Immediate and Partial Validation Mechanism for the Conflict Resolution of Update Operations in XML Databases.*"). Applicants respectfully submit that these references do not teach or suggest each element of these claims.

For example, Applicants' claim 1 as amended recites a computer-implemented method of validating metadata for an object model stored in a database, comprising:

- identifying a first subject of validation, wherein the first subject is one of an object, an attribute, an association and a collection of objects;
- determining a context of metadata validation based on the first subject, the context including one of a) the first subject, and b) the first subject and one or more additional subjects;
- determining one or more validation rules for each subject in the context; and
- applying the determined validation rules to each subject in the context,

wherein applying the determined validation rules results in one of partially and completely validating the metadata for the object model, a partial validating of the object model allowing an existing portion of the metadata to be validated before all metadata for the object model is determined,

wherein applying the determined validation rules occurs prior to deployment of the object model, a deployment of the object model allowing the object model to be used to store data according to the object model.

(*emphasis added*). Such limitations are neither taught nor suggested by these references.

For example, *Drake* teaches coupling validation with the relevant data values such that the validation becomes part of the data model (paragraph [0018]). *Drake* further teaches that the validation process can be done at an early point, such as where the data model is preloaded with data values (paragraph [0021]). In such a case, a complete validation is done with pre-populated data, which data later can be altered/mutated and another validation done (paragraph [0021]). *Drake* does not, however, teach the application of different validation rules for an object model at different times, such as allow for partial validation when not all metadata has been determined and complete validation after all metadata has been determined. *Drake* at best teaches doing a full validation when dummy or "pre-loaded" values are determined for all metadata, then doing another full validation after all updated metadata values have been determined. Additionally, *Drake* does not teach that validation of the model occurs prior to deploying the model. *Drake* at best teaches doing a full validation concurrent with deployment of the model, as the loading of dummy values includes using the data model to store data according to the model. Further, as recognized in the office action, *Drake* does not teach or suggest the data being metadata in an object model stored in a database (OA p. 3). For at least these reasons, *Drake* cannot render obvious Applicants' claim 1.

Combining *Rasmussen* with *Drake*, even if there were motivation to do so, would still not render obvious Applicants' claim 1. *Rasmussen* teaches transforming metadata models containing model objects in a reporting system (col. 1, lines 6-11; col. 3, lines 45-53), and is cited as teaching metadata being stored in databases (OA pp. 3-4). Such teaching would at best store metadata for the *Drake* validation processes in a database, and still would not result in, or provide motivation for, the application of different validation rules for an object model at different times, such as to allow for partial validation when not all metadata has been determined

and complete validation when all metadata has been determined. Further, such teaching would not result in, or provide motivation for, the application of validation rules for an object model occurring prior to deploying the object model. As such, the combination of *Rasmussen* with *Drake* cannot render obvious Applicants' claim 1.

Combining *Rasmussen* with *Drake* and *Sang*, even if there were motivation to do so, would still not render obvious Applicants' claim 1. *Sang* teaches a method of immediate and partial validation for conflict resolution of update operations in an XML database (Title, abstract) and is cited as teaching partial or complete validation (Office Action Pg. 4). *Sang* teaches a method for updating the content of an XML document (Page 389). A DTD (document type definition) file is parsed to determine the correct format for data elements in the XML document. (Page 389). The data element to be inserted is validated against this DTD to validate it follows the correct format as specified in the DTD. (page 391). If the data element is verified as correctly conforming to the DTD, the data element can be inserted into the XML document without having to validate the entire XML document (partial validation of the XML document). (page 389). First, *Sang* does not teach or suggest either partial or complete validation of the metadata for the object model. Metadata for the object model is the data that defines the object model, not the data that is stored using the object model. *Sang* begins with the proposition that the DTD, which is data that defines the model of the XML document, already exists and is accurate. No validation, either complete or partial, of the DTD itself is taught by *Sang*. Second, *Sang* does not teach that validation of the model occurs prior to deploying the model. Even if validating the data element being inserted is incorrectly interpreted to include validating the DTD, *Sang* still does not teach validating the object model prior to deployment. At best, this incorrect interpretation would teach validating the object model concurrently with deploying the object model. Additionally, a combination of these references still would not result in, or provide motivation for application of the validation rules prior to the object model being deployed. As such, the combination of *Rasmussen* with *Drake* and *Sang* cannot render obvious Applicants' claim 1, or the claims that depend therefrom. The other claims recite limitations that

similarly are not rendered obvious by these references for reasons including those set forth above.

Claims 2, 4, 18, and 20-21 are rejected under 35 U.S.C. §103(a) as being obvious over *Drake* and *Rasmussen* and *Sang* further in view of *Mikhailov* (US 6,968,500). These claims are not rendered obvious by *Drake* and *Rasmussen* and *Sang* as discussed above. Combining *Mikhailov* with these references, even if there were motivation to do so, still would not render these claims obvious. *Mikhailov* teaches an automatic forms handling system (col. 1, lines 8-15; col. 5, lines 19-38), and is cited as teaching a group of types of associated metadata (OA p. 9). A combination of these references still would not result in, or provide motivation for, the application of different validation rules for an object model at different times, such as to allow for partial validation when not all metadata has been determined and complete validation when all metadata has been determined. Additionally, a combination of these references still would not result in, or provide motivation for application of the validation rules prior to the object model being deployed. As such, the combination of *Rasmussen* with *Drake* and *Sang* and *Mikhailov* cannot render obvious these claims.

Claims 7-13, 16, and 22-24 are rejected under 35 U.S.C. §103(a) as being obvious over *Drake* and *Rasmussen* and *Sang* further in view of *Lindberg* (US 2003/0028540). These claims are not rendered obvious by *Drake* and *Rasmussen* and *Sang* as discussed above. Combining *Lindberg* with these references, even if there were motivation to do so, still would not render these claims obvious. *Lindberg* teaches a system for transferring information between a user interface and a database over a network (paragraph [0010]), and is cited as teaching a first subject as a root object for a collection of associated objects (OA p. 11). A combination of these references still would not result in, or provide motivation for, the application of different validation rules for an object model at different times, such as to allow for partial validation when not all metadata has been determined and complete validation when all metadata has been determined. Additionally, a combination of these references still would not result in, or provide motivation for application of the validation rules prior to the object model being deployed. As

such, the combination of *Rasmussen* with *Drake* and *Sang* and *Lindberg* cannot render obvious these claims.

Applicants therefore respectfully request that the rejections with respect to these claims be withdrawn.

III. Amendment to the Claims

Unless otherwise specified or addressed in the remarks section, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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